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09/841,665	04/24/2001	Wang Ling	US010217	6225

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EXAMINER

BROWN, VERNAL U

ART UNIT PAPER NUMBER

2635

DATE MAILED: 05/06/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,665

Applicant(s)

LING, WANG

Examiner

Vernal U Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

This action is responsive to communication filed on April 19, 2004.

Response to Amendment

The examiner has acknowledged the amendment to the specification and the addition of claim 21.

Response to Arguments

Applicant's arguments filed April 19, 2004 have been fully considered but they are not persuasive.

Regarding applicant's argument regarding the teaching of Huang et al. concerning the associating plural lighting devices with a particular key of the remote control, the storing of the desired configuration of the lighting device and using a particular key of the remote control device to recall the configuration of the lighting device (col. 9 lines 20-31) is considered as associating plural lighting devices with a particular key of the remote control.

Regarding applicant's argument regarding claim 10, Huang et al. teaches associating the slave unit to the master control unit during the installation process (col. 27 lines 45-64).

Regarding applicant's argument regarding claims 5-7, Huang et al. further teaches a processor (210) for providing commands to the plurality of lighting devices in normal mode (col. 6 lines 35-45) and a normal mode in which the enumeration mode being utilized to associate said plural devices with the apparatus (col. 9 lines 17-30).

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21, it is not clear to the examiner as to what device the phrase "said device" refers to.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1-2, 10, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. U.S Patent 5,962,992.

Regarding claim 1, Huang et al. teaches a method of controlling plural lighting (col. 5 line 66-line 6 line 2) devices with a single remote control (160) comprising the steps of associating, one by one, each of the plural lighting devices with the remote control, and associating, one by one, each of the plural devices associated with the remote control with a particular function or key on the remote control by the configuration of the slave unit (col. 9 lines 20-31).

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Regarding claim 2, Huang et al. teaches the devices communicate with the carrier sense multiple access protocol (col. 33 lines 37-40).

Regarding claim 10, Huang et al. teaches associating each of plural slave devices with a master remote control (100) comprising the steps of communicating a visual signal indicating the presence indicated by the installation of the unit and accepting a user confirmation acknowledging that the device is to be associated with a particular master device (col. 27 lines 45-64).

Regarding claim 21, Huang et al. teaches associating each of plural slave devices with a master remote control (100) by programming and slave units and using the configuration button of the master control unit to slave configuration of the slave unit (col. 9 lines 5-16). Huang et al. also teaches communicating a visual indication that the initialization of the slave device (col. 10 lines 19-22). Huang et al. further teaches communicating a user indication (LED) at the master control that the device is associated with the master remote control unit and a function of the master remote control (col. 10 line 63-col. 11 line 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S Patent 5,962,992 in view of Alt et al. U.S Patent 5936362.

Regarding claim 5, Huang et al. teaches an apparatus for controlling plural lighting devices over a wireless connection by using an IR controller (col. 6 lines 9-11, col. 6 lines 23-25). Huang et al. further teaches a processor (210) for providing commands to said plurality of lighting devices in normal mode (col. 6 lines 35-45), and a means for switching between an enumeration mode (installation and configuration mode) and a normal mode in which the enumeration mode being utilized to associate said plural devices with the apparatus (col. 9 lines 17-30). Huang et al. is however silent on teaching the commands to the lighting devices are transmitted over a wireless connection. Alt et al. in an art related programmable Remote Control System for Electrical Appliance invention teaches the transmission of commands to lighting devices over a wireless connection by a computer (col. 7 lines 53-56).

It would have been obvious to one of ordinary skill in the art to transmit command to lighting device over a wireless connection in Huang et al. as evidenced by Alt et al. because Huang et al. suggest communication by wireless means and transmitting command to lighting devices and Alt et al. teaches the transmission of commands to lighting devices over a wireless connection by a computer. One skilled in the art further recognizes that the conventional means of transmitting signal is by wired or wireless means.

Regarding claim 6, Huang et al. teaches the enumeration mode (installation mode) is complete by providing a visual confirmation with the LED (col. 10 lines 19-22).

Regarding claim 7, Huang et al. teaches comprising software for binding specific

functions or key sequences from a remote control with specific ones of said plural lighting devices (col. 21 lines 10-25).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S Patent 5,962,992 in view of Alt et al. U.S Patent 5936362 and further in view of Hartzell U.S Patent 6,163,275.

Regarding claim 3, Huang et al. in view of Alt et al. teaches the use of a visual confirmation step (col. 9 line 67-col. 10 line 1) but is however silent on teaching the step of associating one by one of each of the plural devices with a particular function and a function key includes a visual confirmation step. Hartzell in an art related remotely controlled dimmer invention teaches providing a visual confirmation after associating a particular function key with a lighting device (col. 3 lines 11-19).

It would have been obvious to one of ordinary skill in the art for the step of associating one by one of each of the plural devices with a particular function and a function key includes a visual confirmation step in Huang et al. in view of Alt et al. as evidenced by Hartzell because Huang et al. in view of Alt et al. suggests the use of a visual confirmation step and . Hartzell teaches providing a visual confirmation after associating a particular function key with a lighting device.

Regarding claim 4, Huang et al. teaches the visual confirmation includes a predefined sequence of on/off occurrences by flashing a LED (col. 8 line 12).

Claims 8-9, 17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Mitchell et al. U.S Patent 5847955.

Regarding claim 8, Huang et al. teaches a method of utilizing a wireless lighting control protocol comprising the steps of providing a standardized command set for facilitating command and control between a master and plural slave lighting devices which is stored in the EEPROM (col. 6 lines 42-48). Huang et al. further teaches the binding of the slave devices and the master controller is achieved through the processor (col. 13 lines 29-40) which inherently includes the a software application but is not explicit in teaching interposing a layer of software between the command set and a software application and the layer of software includes means for initialization and binding of the plural slave lighting devices and the master device. Mitchell et al. in an art related remote control system teaches interposing a layer of software between a command set and a software application and the layer (figure 4).

It would have been obvious to one of ordinary skill in the art to interpose a layer of software between the command set and a software application in Huang et al. as evidenced by Mitchell et al. because Huang et al. suggests teaches the binding of the slave devices and the master controller is achieved through the processor which inherently includes the a software application and Mitchell et al. teaches between a command set and a software application and the layer as a means of customization of the software application.

Regarding claim 9, Huang et al. teaches polling each of the slave devices individually and sequentially to thereby associate each of said devices with the master (col. 10 lines 50-59).

Regarding claim 17, Huang et al. teaches the master device comprises a remote control (160) and associating at least one of the slave devices with a particular key of the remote control (col. 9 lines 20-31).

Regarding claims 19-20, Huang et al. teaches the visual confirmation includes a predefined sequence of on/off occurrences by flashing a LED (col. 8 line 12).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S. patent 5962992 in view of Mitchell et al. U.S. Patent 5847955 and further in view of Grouev et al. 6333605.

Regarding claim 11, Huang et al. teaches the a lighting control system in which the master and the slave devices are in communication (figure 1) but is silent on teaching the master and the slave device communicates using the DALI protocol. One skilled in the art recognizes that DALI is used as a communication protocol as evidenced by Grouev et al. (col. 2 lines 24-27), therefore it is obvious to use DALI as the communication protocol in the lighting system of Huang et al. in view of Mitchell et al.

It would have been obvious to one of ordinary skill in the art for the master and the slave device to communicate using the DALI protocol in Huang et al. in view of Mitchell et al. as evidenced by Grouev et al. because Huang et al. in view of Mitchell et al. suggests a lighting control system in which the master and the slave devices are in communication and one skilled in the art recognizes that DALI is used as a communication protocol as evidenced by Grouev et al.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S. patent 5962992 in view of applicant's admitted prior art.

Regarding claim 12, Huang et al. teaches a method of controlling plural lighting (col. 5 line 66-line 6 line 2) devices with a single remote control (160) but is silent on teaching the lighting devices communicate using Digital Addressable Lighting Interface protocol. The applicant's admitted prior art teaches lighting devices communicate with a remote control (central control) using a Digital Addressable Lighting Interface protocol (page 1 lines 11-14).

It would have been obvious to one of ordinary skill in the art for the lighting devices to communicate using Digital Addressable Lighting Interface protocol in Huang et al. as evidenced by the applicant's admitted prior art because teaches a method of controlling plural lighting devices with a single remote control and applicant's admitted prior art teaches lighting devices communicate with a remote control using a Digital Addressable Lighting Interface protocol and Digital Addressable Lighting Interface protocol is a widely acceptable standard for communicating with lighting devices.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S. patent 5962992 in view of applicant's admitted prior art and further in view of Colton U.S. Patent 5986574.

Regarding claim 13, Huang et al. in view of applicant's admitted prior art teaches lighting devices communicate over a network using Digital Addressable Lighting Interface protocol (see response to claim 12) but is however silent on teaching the DALI protocol is supported by an application layer and the remote control comprises a network layer, data link layer, and a physical layer. The reference of Colton teaches the use of a communication protocol based on

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the International Standard Organization (ISO) Open System Interconnection in which the CE bus is used as the application protocol (col. 3 line 34-col. 4 line 5) and figure 3. The system as claimed supporting an application layer the remote control comprises a network layer, data link layer, and a physical layer represent a four layer model based on the International Standard Organization (ISO) Open System Interconnection in which the DALI standard is used as the application layer. One skilled in the art recognizes that the Open system communication model is adaptable to different communication protocol making it obvious to use the DALI protocol as the application layer in the Open System Interconnection model.

It would have been obvious to one of ordinary skill in the art for the DALI protocol to be supported by an application layer and the remote control comprises a network layer, data link layer, and a physical layer in Huang et al. in view of applicant's admitted prior art as evidenced by Colton because Huang et al. in view of applicant's admitted prior art suggests lighting devices communicate over a network using Digital Addressable Lighting Interface protocol and the system as claimed supporting an application layer with the remote control comprises a network layer, data link layer, and a physical layer represent a four layer model based on the International Standard Organization (ISO) Open System Interconnection in which the DALI standard is used as the application layer. One skilled in the art recognizes that the Open system communication model is adaptable to different communication protocol making it obvious to use the DALI protocol as the application layer in the Open System Interconnection model.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S. patent 5962992 in view of applicant's admitted prior art in view of Colton U.S. Patent 5986574 and further in view of Kronz U.S. Patent 6675196.

Regarding claim 14, Huang et al. in view of applicant's admitted prior art in view of Colton teaches a communication protocol including data link and physical layer (see response to claim 13) but is silent on teaching the data link and the physical layer support Bluetooth communication. Kronz in an art related remote control device teaches the data link and the physical layer support Bluetooth communication (col. 7 lines 14-16).

It would have been obvious to one of ordinary skill in the art for the data link and the physical layer support Bluetooth communication in Huang et al. in view of applicant's admitted prior art in view of Colton as evidenced by Kronz because Huang et al. in view of applicant's admitted prior art in view of Colton suggests the use of the Open System Interconnection having a data link and physical layer and Kronz teaches the data link and the physical layer support Bluetooth communication.

Claims 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S. patent 5962992 in view of Meier et al. U.S. Patent 5295154.

Regarding claims 15-16 and 18, Huang et al. teaches the use of installation code (address) for identifying the slave unit (col. 9 lines 65-66) and (col. 35 lines 1-5) and further teaches providing a visual indication when the address is assigned to the device (col. 30 lines 4-6) but is however silent on teaching the use of a short address. Meier et al. in an art related Local Area Network invention teaches the use of a short address in order to minimize the transmission time (col. 9 lines 4-5).

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It would have been obvious to one of ordinary skill in the art to use a short address in Huang et al. as evidenced by Meier et al. because Huang et al. suggests use of installation code (address) for identifying the slave unit and Meier et al. teaches the use of a short address in order to minimize the transmission time.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U Brown whose telephone number is 703-305-3864. The examiner can normally be reached on M-Th, 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vernal Brown
May 3, 2004



BRIAN ZIMMERMAN
PRIMARY EXAMINER